



FortiSwitch Release Notes

Version 6.4.8

FORTINET DOCUMENT LIBRARY

<http://docs.fortinet.com>

FORTINET VIDEO GUIDE

<http://video.fortinet.com>

FORTINET BLOG

<https://blog.fortinet.com>

CUSTOMER SERVICE & SUPPORT

<https://support.fortinet.com>

<http://cookbook.fortinet.com/how-to-work-with-fortinet-support/>

FORTIGATE COOKBOOK

<http://cookbook.fortinet.com>

FORTINET TRAINING SERVICES

<http://www.fortinet.com/training>

FORTIGUARD CENTER

<http://www.fortiguard.com>

FORTICAST

<http://forticast.fortinet.com>

END USER LICENSE AGREEMENT

<http://www.fortinet.com/doc/legal/EULA.pdf>

FORTINET PRIVACY POLICY

<https://www.fortinet.com/corporate/about-us/privacy.html>

FEEDBACK

Email: techdocs@fortinet.com



FortiSwitch Release Notes

September 14, 2021

11-648-726220-20210914

TABLE OF CONTENTS

Change log	4
Introduction	5
Supported models	5
What's new in FortiSwitchOS 6.4.8	6
Special notices	7
Supported features for FortiSwitchOS 6.4.8	7
Connecting multiple FSR-112D-POE switches	16
Upgrade information	17
Product integration and support	18
FortiSwitchOS 6.4.8 support	18
Resolved issues	19
Common vulnerabilities and exposures	19
Known issues	20

Change log

Date	Change Description
July 12, 2021	Initial release for FortiSwitchOS 6.4.8
September 14, 2021	Corrected the description of bug 682442.

Introduction

This document provides the following information for FortiSwitchOS 6.4.8 build 0482.

- [Supported models on page 5](#)
- [Special notices on page 7](#)
- [Upgrade information on page 17](#)
- [Product integration and support on page 18](#)
- [Resolved issues on page 19](#)
- [Known issues on page 20](#)

See the [Fortinet Document Library](#) for FortiSwitch documentation.

Supported models

FortiSwitchOS 6.4.8 supports the following models:

FortiSwitch 1xx	FS-108E, FS-108E-POE, FS-108E-FPOE, FS-108F, FS-108F-POE, FS-108F-FPOE, FS-124E, FS-124E-POE, FS-124E-FPOE, FS-124F, FS-124F-POE, FS-124F-FPOE, FS-148E, FS-148E-POE, FS-148F, FS-148F-POE, FS-148F-FPOE
FortiSwitch 2xx	FS-224D-FPOE, FS-224E, FS-224E-POE, FS-248D, FS-248E-POE, FS-248E-FPOE
FortiSwitch 4xx	FS-424D, FS-424D-FPOE, FS-424D-POE, FS-424E, FS-424E-POE, FS-424E-FPOE, FS-424E-Fiber, FS-M426E-FPOE, FS-448D, FS-448D-FPOE, FS-448D-POE, FS-448E, FS-448E-POE, FS-448E-FPOE
FortiSwitch 5xx	FS-524D-FPOE, FS-524D, FS-548D, FS-548D-FPOE
FortiSwitch 1xxx	FS-1024D, FS-1048D, FS-1048E
FortiSwitch 3xxx	FS-3032D, FS-3032E
FortiSwitch Rugged	FSR-112D-POE, FSR-124D

What's new in FortiSwitchOS 6.4.8

FortiSwitchOS 6.4.8 is a patch release only. No new features or enhancements have been implemented in this release.

Special notices

Supported features for FortiSwitchOS 6.4.8

The following table lists the FortiSwitch features in Release 6.4.8 that are supported on each series of FortiSwitch models. All features are available in Release 6.4.8, unless otherwise stated.

Feature	GUI supported	112D-POE	FSR-124D	1xxE 1xxF	4xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
Management and Configuration									
CPLD software upgrade support for OS	—	—	—	—	—	—	—	1024D 1048D	—
Firmware image rotation (dual-firmware image support)	—	✓	✓	148E 148E-POE	✓	✓	✓	✓	✓
HTTP REST APIs for configuration and monitoring	—	✓	✓	✓	✓	✓	✓	✓	✓
Support for switch SNMP OID	✓	✓	✓	✓	✓	✓	✓	✓	✓
IP conflict detection and notification	✓	✓	✓	✓	✓	✓	✓	✓	✓
FortiSwitch Cloud configuration	✓	✓	✓	✓	✓	✓	✓	✓	✓
Auto topology	—	✓	✓	✓	✓	✓	✓	✓	✓
Security and Visibility									
802.1x port mode	✓	✓	✓	✓	✓	✓	✓	✓	✓
802.1x MAC-based security mode	✓	✓	✓	✓	✓	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE 1xxF	4xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
User-based (802.1x) VLAN assignment	✓	✓	✓	✓	✓	✓	✓	✓	✓
802.1x enhancements, including MAB	✓	✓	✓	✓	✓	✓	✓	✓	✓
MAB reauthentication disabled	—	✓	✓	✓	✓	✓	✓	✓	✓
open-auth mode	✓	✓	✓	✓	✓	✓	✓	✓	✓
Support of the RADIUS accounting server	Partial	✓	✓	✓	✓	✓	✓	✓	✓
Support of RADIUS CoA and disconnect messages	—	✓	✓	✓	✓	✓	✓	✓	✓
EAP Pass-Through	✓	✓	✓	✓	✓	✓	✓	✓	✓
Network device detection	—	—	✓	—	✓	✓	✓	✓	✓
IP-MAC binding (IPv4)	✓	—	—	—	—	—	✓	✓	✓
sFlow (IPv4)	✓	✓	✓	—	✓	✓	✓	✓	✓
Flow export (IPv4)	✓	—	✓	—	✓	✓	✓	✓	✓
ACL (IPv4)	✓	—	✓	✓	✓	✓	✓	✓	✓
Multistage ACL (IPv4)	✓	—	—	—	—	—	✓	✓	✓
Multiple ingress ACLs (IPv4)	✓	—	✓	—	✓	✓	✓	✓	✓
Schedule for ACLs (IPv4)	—	—	✓	✓	✓	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE 1xxF	4xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
DHCP snooping	✓	✓	✓	✓	✓	✓	✓	✓	✓
DHCPv6 snooping	✓	—	—	—	✓	✓	✓	✓	✓
Allowed DHCP server list	✓	✓	✓	✓	✓	✓	✓	✓	✓
IP source guard (IPv4)	✓	—	✓	—	✓	✓	—	—	—
IP source-guard violation log	—	—	✓	—	✓	✓	—	—	—
Dynamic ARP inspection (IPv4)	✓	—	✓	✓	✓	✓	✓	✓	✓
ARP timeout value	—	✓	✓	✓	✓	✓	✓	✓	✓
Access VLANs (See Note 8.)	—	✓	✓	✓	✓	✓	✓	✓	✓
RMON group 1	—	✓	✓	✓	✓	✓	✓	✓	✓
Reliable syslog	—	✓	✓	✓	✓	✓	✓	✓	✓
Packet capture	✓	—	✓	—	✓	✓	✓	✓	✓
MACsec (See Note 7.)	—	—	—	—	—	—	✓	—	—
Layer 2									
Link aggregation group size (maximum number of ports) (See Note 2.)	✓	8	8	8	8	8	24/48	24/48	24 64
LAG min-max-bundle	—	✓	✓	✓	✓	✓	✓	✓	✓
IPv6 RA guard	—	—	—	—	✓	✓	✓	✓	✓
IGMP snooping	✓	✓	✓	✓	✓	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE 1xxF	4xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
IGMP proxy	✓	✓	✓	✓	✓	✓	✓	✓	✓
IGMP querier	—	✓	✓	✓	✓	✓	✓	✓	✓
MLD snooping	—	—	—	—	—	—	✓	✓	✓
MLD proxy	—	—	—	—	—	—	✓	✓	✓
MLD querier	—	—	—	—	—	—	✓	✓	✓
LLDP transmit	—	✓	✓	✓	✓	✓	✓	✓	✓
LLDP-MED	—	✓	✓	✓	✓	✓	✓	✓	✓
LLDP-MED: ELIN support	✓	✓	✓	✓	✓	✓	✓	✓	✓
Per-port max for learned MACs	—	—	✓	✓	✓	✓	✓	—	—
MAC learning limit (See Note 4.)	—	—	✓	✓	✓	✓	✓	—	—
Learning limit violation log (See Note 4.)	—	—	✓	✓	✓	✓	✓	—	—
set mac-violation-timer	—	✓	✓	✓	✓	✓	✓	✓	✓
Sticky MAC	✓	✓	✓	✓	✓	✓	✓	✓	✓
Total MAC entries	—	✓	✓	✓	✓	✓	✓	✓	✓
MSTP instances	—	0-15	0-15	0-15	0-15	0-15	0-32	0-32	0-32
STP root guard	—	✓	✓	✓	✓	✓	✓	✓	✓
STP BPDU guard	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rapid PVST interoperoperation	—	✓	✓	✓	✓	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE 1xxF	4xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
'forced-untagged' or 'force-tagged' setting on switch interfaces	—	✓	✓	✓	✓	✓	✓	✓	✓
Private VLANs	✓	—	✓	—	✓	✓	✓	✓	✓
Multi-stage load balancing	—	—	—	—	—	—	—	✓	✓
Priority-based flow control	—	—	—	—	—	—	✓	✓	✓
Ingress pause metering	—	—	—	—	✓	✓	✓	✓	3032D
Storm control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Per-port storm control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Global burst-size control	—	✓	✓	✓	✓	✓	✓	✓	✓
MAC/IP/protocol-based VLAN assignment	✓	✓	✓	✓	✓	✓	✓	✓	✓
Virtual wire	✓	—	✓	—	✓	✓	✓	✓	✓
Loop guard	✓	✓	✓	✓	✓	✓	✓	✓	✓
Percentage rate control	✓	—	✓	—	✓	✓	✓	✓	✓
VLAN stacking (QinQ)	—	—	✓	—	✓	✓	✓	✓	✓
VLAN mapping	—	—	✓	—	✓	✓	✓	✓	✓
SPAN	✓	✓	✓	✓	✓	✓	✓	✓	✓
RSPAN and ERSPAN (IPv4)	✓	RSPAN	✓	—	✓	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE 1xxF	4xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
Flow control	—	✓	✓	✓	✓	✓	✓	✓	✓
Layer 3									
Link monitor (IPv4)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Static routing (IPv4/IPv6)	✓	—	✓	✓	✓	✓	✓	✓	✓
Hardware routing offload (IPv4/IPv6)	✓	—	✓	—	✓	✓	✓	✓	✓
Software routing only (IPv4/IPv6)	✓	✓	—	✓	—	—	—	—	—
OSPF (IPv4/IPv6) (See Note 3.)	✓	—	—	—	✓	✓	✓	✓	✓
OSPF database overflow protection (IPv4)	—	—	—	—	✓	✓	✓	✓	✓
OSPF graceful restart (helper mode only) (IPv4)	—	—	—	—	✓	✓	✓	✓	✓
RIP (IPv4/IPv6) (See Note 3.)	✓	—	—	—	✓	✓	✓	✓	✓
VRRP (IPv4/IPv6) (See Note 3.)	✓	—	—	—	✓	✓	✓	✓	✓
BGP (IPv4/IPv6) (See Note 3.)	—	—	—	—	—	—	✓	✓	✓
IS-IS (IPv4/IPv6) (See Note 3.)	—	—	—	—	✓	✓	✓	✓	✓
PIM (IPv4) (See Note 3.)	—	—	—	—	—	—	✓	✓	✓
Hardware-based ECMP (IPv4)	—	—	—	—	—	—	✓	✓	✓
VRF (IPv4/IPv6)	—	—	—	—	—	—	—	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE 1xxF	4xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
Static BFD (IPv4/IPv6)	✓	✓	✓	✓	✓	✓	✓	✓	✓
BFD for BGPv6	—	—	—	—	—	—	✓	✓	✓
BFD for RIPv6	—	—	—	—	✓	✓	✓	✓	✓
uRPF	—	—	—	—	—	—	✓	✓	✓
DHCP relay (IPv4)	✓	—	✓	✓	✓	✓	✓	✓	✓
DHCP server (IPv4)	✓	—	—	—	✓	4xx only	✓	✓	✓
High Availability									
MCLAG (multichassis link aggregation)	Partial	—	—	—	✓	✓	✓	✓	✓
STP supported in MLAGs	—	—	—	—	✓	✓	✓	✓	✓
IGMP snooping support in MLAG	✓	—	—	—	✓	✓	✓	✓	✓
Quality of Service									
802.1p support, including priority queuing trunk and WRED	✓	—	✓	✓	✓	✓	✓	✓	✓
QoS queue counters	—	—	✓	—	✓	✓	✓	✓	✓
QoS marking (IPv4/IPv6)	—	—	✓	—	✓	✓	✓	✓	✓
Summary of configured queue mappings	✓	—	✓	✓	✓	✓	✓	✓	✓
Egress priority tagging (IPv4/IPv6)	—	—	✓	—	✓	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE 1xxF	4xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
ECN (IPv4/IPv6)	—	—	—	—	✓	—	✓	✓	✓
Real-time egress queue rates	—	—	—	—	—	✓	✓	✓	✓
Miscellaneous									
PoE-pre-standard detection (See Note 1.)	—	✓	✓	FS-1xxE POE	✓	✓	✓	—	—
PoE modes support: first come, first served or priority based (PoE models)	—	✓	✓	FS-1xxE POE	✓	✓	✓	—	—
Control of temperature alerts	—	✓	✓	—	✓	✓	✓	✓	✓
Split port (See Note 6.)	Partial	—	—	—	—	—	✓	1048E	✓
TDR (time-domain reflectometer)/cable diagnostics support	✓	—	✓	✓	✓	✓	✓	—	—
Auto module max speed detection and notification	✓	—	—	—	—	—	✓	✓	—
Monitor system temperature (threshold configuration and SNMP trap support)	—	✓	✓	FS-124E-POE FS-124E-FPOE FS-148E FS-148E-POE	✓	✓	✓	✓	✓

Feature	GUI supported	112D-POE	FSR-124D	1xxE 1xxF	4xxE	200 Series 400 Series	500 Series	1024D 1048D 1048E	3032D 3032E
Cut-through switching	—	—	—	—	—	—	—	✓	✓
Add CLI to show the details of port statistics	—	✓	✓	✓	✓	✓	✓	✓	✓
Configuration of the QSFP low-power mode	—	—	—	—	—	—	✓	1048D 1048E	✓
Energy-efficient Ethernet	✓	✓	✓	✓	✓	✓	✓	—	—
PHY Forward Error Correction (See Note 5.)	—	—	—	—	—	—	—	1048E	3032E
PTP transparent clock (IPv4/IPv6) (See Note 9.)	—	—	—	—	✓	✓	✓	1048E	✓

Notes

- PoE features are applicable only to the model numbers with a POE or FPOE suffix.
- The 24-port LAG is applicable to FS-524D, FS-524-FPOE, FS-1024D, and FS-3032D models. The 48-port LAG is applicable to FS-548D, FS-548-FPOE, and FS-1048D models.
- To use the dynamic layer-3 protocols, you must have an advanced features license.
- The per-VLAN MAC learning limit and per-trunk MAC learning limit are not supported on the FS-448D, FS-448D-POE, FS-448D-FPOE, FS-248E-POE, FS-248E-FPOE, FS-248D series.
- Supported only in 100G mode (clause 91).
- On the FS-3032E, you can split one port at the full base speed, split one port into four sub-ports of 25 Gbps each (100G QSFP only), or split one port into four sub-ports of 10 Gbps each (40G or 100G QSFP).
- Supported on FS-5xxD 10G ports.
- The maximum number of access VLANs on the FS-1xxE models is 16; the maximum number of access VLANs on the FS-148F models is 32.
- PTP is not supported on the FS-248E, FS-248E-POE, FS-248E-FPOE, FS-448D, FS-448D-POE, and FS-448D-FPOE models.

Connecting multiple FSR-112D-POE switches

The FSR-112D-POE switch does not support interconnectivity to other FSR-112D-POE switches using the PoE ports. Fortinet recommends using the SFP ports to interconnect switches.

Upgrade information

FortiSwitchOS 6.4.8 supports upgrading from FortiSwitchOS 3.5.0 and later.

For FortiSwitch units managed by FortiGate units, refer to the *FortiSwitch Devices Managed by FortiOS Release Notes* for upgrade information. See <https://docs.fortinet.com/product/fortiswitch/6.4>.

Product integration and support

FortiSwitchOS 6.4.8 support

The following table lists FortiSwitchOS 6.4.8 product integration and support information.

Web browser	<ul style="list-style-type: none">• Mozilla Firefox version 52• Google Chrome version 56 <p>Other web browsers may function correctly, but are not supported by Fortinet.</p>
FortiOS (FortiLink Support)	FortiLink is supported on all FortiSwitch models when running FortiOS 5.4.0 and later and FortiSwitchOS 3.2.1 and later.

Resolved issues

The following issues have been fixed in FortiSwitchOS 6.4.8. For inquiries about a particular bug, please contact [Customer Service & Support](#).

Bug ID	Description
488900	The processing load for background tasks is too high for some FortiSwitch models.
566433	Setting the value for <code>ca-cert</code> causes LDAP authentication to fail sometimes.
589912	The version of OpenSSL needs to be upgraded to 1.1.1k.
598871	Some 4xxE switches report “failed BASE ID Check Sequence” and “failed reading register” errors.
617755	The internal interface cannot obtain IPv6 addresses with <code>dhcpv6-snooping</code> enabled on the native VLAN.
701196	The root port for the spanning tree inter-chassis link (ICL) flaps in an MCLAG topology.
706717	The first time that the managed FS-108E-FPOE model attempts RADIUS authentication to the Cisco Identity Services Engine (ISE) always fails.
710229	When FortiSwitch 802.1x port-based authentication is configured on a switch port with <code>learning-limit</code> set to 1, traffic is not received on the FortiGate device.
712323	After VRRP is enabled, the switch does not respond to ARP requests from the directly connected interface.
719044	After enabling a MACsec profile for a port, client traffic stopped flowing from that port.
719628	In an “MCLAG with access rings” topology, the managed switch crashes with an “Unable to handle kernel NULL pointer dereference at virtual address 0000000c” error.
720946	MAC addresses on FS-104E MCLAG switches that were learned from other switches are being deleted and affecting user traffic.
722738	The temperatures reported for FS-224E models are higher than they actually are.

Common vulnerabilities and exposures

FortiSwitchOS 6.4.8 is no longer vulnerable to the following CVEs:

- CVE-2021-3449

Visit <https://fortiguard.com/psirt> for more information.

Known issues

The following known issues have been identified with FortiSwitchOS 6.4.8. For inquiries about a particular bug or to report a bug, please contact [Fortinet Customer Service & Support](#).

Bug ID	Description
382518, 417024, 417073, 417099, 438441	DHCP snooping and dynamic ARP inspection (DAI) do not work with private VLANs (PVLANS).
414972	IGMP snooping might not work correctly when used with 802.1x Dynamic VLAN functionality.
480605	<p>When DHCP snooping is enabled on the FSR-112D-POE, the switched virtual interface (SVI) cannot get the IP address from the DHCP server.</p> <p>Workarounds:</p> <ul style="list-style-type: none">—Use a static IP address in the SVI when DHCP snooping is enabled on that VLAN.—Temporarily disable dhcp-snooping on vlan, issue the <code>execute interface dhcpclient-renew <interface></code> command to renew the IP address. After the SVI gets the IP address from the DHCP server, you can enable DHCP snooping.
510943	<p>The time-domain reflectometer (TDR) function (cable diagnostics feature) reports unexpected values.</p> <p>Workaround: When using the cable diagnostics feature on a port (with the <code>diagnose switch physical-ports cable-diag <physical port name></code> CLI command), ensure that the physical link on its neighbor port is down. You can disable the neighbor ports or physically remove the cables.</p>
520954	When a “FortiLink mode over a layer-3 network” topology has been configured, the FortiGate GUI does not always display the complete network.
542031	For the 5xx switches, the <code>diagnose switch physical-ports led-flash</code> command flashes only the SFP port LEDs, instead of all the port LEDs.
548783	Some models support setting the mirror destination to “internal.” This is intended only for debugging purposes and might prevent critical protocols from operating on ports being used as mirror sources.
572052	<p>Backup files from FortiSwitchOS 3.x that have 16-character-long passwords fail when restored on FortiSwitchOS 6.x. In FortiSwitchOS 6.x, file backups fail with passwords longer than 15 characters.</p> <p>Workaround: Use passwords with a maximum of 15 characters for FortiSwitchOS 3.x and 6.x.</p>

Bug ID	Description
585550	When packet sampling is enabled on an interface, packets that should be dropped by uRPF will be forwarded.
606044	The value for cable length is wrong when running cable diagnostics on the FS-108E, FS-124E, FS-108E-POE, FS-108E-FPOE, FS-124E-POE, FS-124E-FPOE, FS-148E, and FS-148E-POE models.
609375	The FortiSwitchOS supports four priority levels (critical, high, medium, and low); however, The SNMP Power Ethernet MIB only supports three levels. To support the MIB, a power priority of medium is returned as low for the PoE MIB.
610149	The results are inaccurate for open and short cables when running cable diagnostics on the FS-108E, FS-124E, FS-108E-POE, FS-108E-FPOE, FS-124E-POE, FS-124E-FPOE, FS-148E, and FS-148E-POE models.
673433	Some 7-meter DAC cables cause traffic loss for the FS- 448E model.
682442	Do not use FCLF8521P2BTL and FCLF8522P2BTL modules. They are not supported and can cause issues on the FortiSwitch unit. To find supported modules, refer to the FortiSwitch-Compatible Transceivers matrix .



FORTINET®



Copyright© 2021 Fortinet, Inc. All rights reserved. Fortinet®, FortiGate®, FortiCare® and FortiGuard®, and certain other marks are registered trademarks of Fortinet, Inc., in the U.S. and other jurisdictions, and other Fortinet names herein may also be registered and/or common law trademarks of Fortinet. All other product or company names may be trademarks of their respective owners. Performance and other metrics contained herein were attained in internal lab tests under ideal conditions, and actual performance and other results may vary. Network variables, different network environments and other conditions may affect performance results. Nothing herein represents any binding commitment by Fortinet, and Fortinet disclaims all warranties, whether express or implied, except to the extent Fortinet enters a binding written contract, signed by Fortinet's General Counsel, with a purchaser that expressly warrants that the identified product will perform according to certain expressly-identified performance metrics and, in such event, only the specific performance metrics expressly identified in such binding written contract shall be binding on Fortinet. For absolute clarity, any such warranty will be limited to performance in the same ideal conditions as in Fortinet's internal lab tests. In no event does Fortinet make any commitment related to future deliverables, features, or development, and circumstances may change such that any forward-looking statements herein are not accurate. Fortinet disclaims in full any covenants, representations, and guarantees pursuant hereto, whether express or implied. Fortinet reserves the right to change, modify, transfer, or otherwise revise this publication without notice, and the most current version of the publication shall be applicable.